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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary**Application No.**

10/796,612

Applicant(s)

INCHINGOLO ET AL.

Examiner

ERIC C. WAI

Art Unit

2195

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 December 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-8508)
- Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. Claims 1 and 3-32 are presented for examination.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claims 8-12, and 19-24 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.
4. Claim 8 recites, "data representations ... data representations ... data". Such data represents an abstract idea.
5. When nonfunctional descriptive material is recorded on some computer-readable medium, in a computer or on an electromagnetic carrier signal, it is not statutory since no requisite functionality is present to satisfy the practical application requirement. Merely claiming nonfunctional descriptive material, i.e., abstract ideas, stored on a computer-readable medium, in a computer, or on an electromagnetic carrier signal, does not make it statutory (See MPEP 2106.01).
6. Regarding claim 19, even though Applicant has invoked the rebuttable presumption that 35 USC 112, 6th paragraph applies in the claim interpretation of the "means," corresponding "structure" in the disclosure is not automatically and inherently

limited to hardware-inclusive embodiments. It is entirely possible for the corresponding disclosed “means” to cover an embodiment of software alone.

7. Use of the word “**system**” does not inherently mean that the claim is directed to a **machine**. Only if at least one of the claimed elements of the system is a **physical part** of a device can the system as claimed constitute part of a device or a combination of devices to be a **machine** within the meaning of 101.

Claim Rejections - 35 USC § 112

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claims 1, and 3-32 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a. Claim 1 recites, “wherein couplings of task elements to attachment locations on the resource element specify an execution ordering constraint on the tasks associated with the task elements”. It is unclear how this coupling of task elements specifies an ordering constraint. Limitations such as “wherein the coupling ... specify an execution order constraint” render the claim indefinite as it is unclear what Applicant seeks to claim as his invention.

b. Claim 1 also recites, “executing the tasks according to the graphical representation of task dependency”. One of ordinary skill would interpret task

dependency as being a graph in which tasks are dependent on other tasks and edges/lines indicated such dependency. However, Applicant's claim is not functional in lieu of the ordinary meaning of task dependency. For this reason, it is unclear what Applicant is seeking to claim as his invention with the step of "execution of tasks according to the graphical representation of task dependency".

c. Claims 8, 13, 19, and 25 are rejected for the same reasons as claim 1 above.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 1, and 3-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bayer et al (US Pat No. 5,202,987 hereinafter Bayer) in view of Kavoori et al (US Pat No. 7,039,915 hereinafter Kavoori).

12. Bayer was disclosed on IDS dated 03/07/2007.

13. Regarding claim 1, Bayer teaches a method for control of task execution in a computer system including:

accepting a specification of a graphical representation of task dependency having a plurality of task elements each associated with a different task (col 6 lines 52-53); and

executing the tasks according to the graphical representation of task dependency (col 6 line 49).

14. Bayer does not teach a resource element having a plurality of attachment locations, and linking elements coupling the task elements to the resource element at the plurality of attachment locations, wherein couplings of task elements to attachment locations on the resource element specify an execution ordering constraint on the tasks associated with the task elements

15. Kavoori teaches scheduling the allocation of hardware resources to allow for reuse (col 6 lines 46-49 and col 9 lines 53-59). Kavoori teaches that use of resources is serial in nature and each process must sequentially access the resource (col 10 lines 6-9). Kavoori further illustrates an embodiment of his invention using Figure 1C.

16. It would have been obvious to one of ordinary skill in the art, to modify Bayer's task graph to incorporate resources and indicating the scheduling of such resources using a timeline such as indicated by Kavoori. One would be motivated by the desire to indicate the scheduling of resources as taught by Kavoori.

17. Regarding claim 3, Bayer teaches that the task elements comprise nodes in the graphical representation, and the linking elements comprise links in the graphical representation (col 6 lines 53-54).

18. Regarding claim 4, Kavoori teaches that the resource element comprises a timeline with the attachment locations being associated with points on the timeline (Fig 1C, col 6 lines 46-49 and col 9 lines 53-59).

19. Regarding claim 5, Kavoori teaches that the resource element is associated with a computation resource for access by the tasks (col 6 lines 46-49).

20. Regarding claims 6-7, Bayer and Kavoori do not teach that the computation resource includes a storage resource or data table.

21. Kavoori teaches that his system can be implemented in any electronic device need to control hardware resources (col 6 lines 37-39). It would have been obvious to one of ordinary skill in the art at the time of the invention, to modify Bayer and Kavoori to include a storage resource or data table. It is well known in the art that storage resources or data tables are common forms of resources.

22. Regarding claims 26-27, Bayer and Kavoori do not explicitly teach that the relative positions of the plurality of attachment locations on the resource element define the ordering constraint or that the plurality of attachment locations comprises at least 3 attachment locations.

23. Bayer does teach that scheduling is a critical aspect of executing a given program and that static scheduling can be determined before program run-time (col 1 lines 28-51).

24. It would have been obvious to one of ordinary skill in the art at the time of the invention to include that the relative positions of the plurality of the plurality of attachment locations define an ordering constraint. One would be motivated by the desire to define a static scheduling policy to reduce the overhead associated with dynamic scheduling as taught by Bayer (col 1 lines 52-56).

25. Regarding claims 8-25, and 28-32, they are the computer readable medium, system, and method claims of claims 1, 3-7 and 26-27 above. Therefore, they are rejected for the same reasons as claims 1, 3-7 and 26-27 above.

Response to Arguments

26. Applicant's arguments with respect to claims 1 and 3-32 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ERIC C. WAI whose telephone number is (571)270-1012. The examiner can normally be reached on Mon-Fri, 9am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng - Ai An can be reached on 571-272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Eric C Wai/
Examiner, Art Unit 2195

/Meng-Ai An/
Supervisory Patent Examiner, Art Unit 2195